

228-717

12/12/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Nufarm Americas, Inc.  
11901 S. Austin Avenue  
Alsip, IL 60803

Subject: Amended label adding pollinator protection language  
Product Name: Kilter Insecticide  
EPA Reg. No. 228-717  
EPA Decision No. 483571  
Submission dated August 19, 2013

DEC 12 2013

Dear Ms. Tackema:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. See 40 CFR 156.10(a)(6).

Under 40 CFR 152.130(d), EPA may establish dates by which all product distributed or sold by the registrant must bear revised labeling. The following paragraphs set forth the schedule for ensuring that that your product bears revised labeling within a reasonable time period.

- Any product released for shipment after 2/28/14 must bear the new label.

If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Dr. Jennifer Urbanski at 703-347-0156 or [urbanski.jennifer@epa.gov](mailto:urbanski.jennifer@epa.gov).

Regards,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle, Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

2/23

**RESTRICTED USE PESTICIDE**  
 DUE TO PRIMARY EYE TOXICITY AND TOXICITY TO FISH AND AQUATIC ORGANISMS  
 FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS, OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

Sale, use and distribution of this product in Nassau and Suffolk counties in the State of New York is prohibited.

**GROUP 3 & 4A INSECTICIDE**

# Kilter™ Insecticide

FOR AGRICULTURAL USE TO CONTROL LISTED PESTS.

**ACTIVE INGREDIENTS:**

Imidacloprid*: 1 [(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine .....	14.49%
Lambda- Cyhalothrin**: (R+S)-alpha-Cyano-3-phenoxybenzyl (1S+1R)-cis-3-(Z-2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate .....	10.86%

**OTHER INGREDIENTS:** ..... 74.65%

**TOTAL:** ..... 100.00%

\*Contains 1.34 pounds of imidacloprid per gallon

\*\*Contains 1.00 pounds of lambda-cyhalothrin per gallon

This product is a Suspension Concentrate.

**KEEP OUT OF REACH OF CHILDREN**  
**DANGER - PELIGRO**

PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este product hasta que la etiqueta le haya sido explicada ampliamente.  
 (TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

**SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS**

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
 For Medical Emergencies Only, Call (877) 325-1840

ACCEPTED

DEC 12 2013

Under the Federal Insecticide, Fungicide,

EPA REG. NO. 228-717 and Rodenticide Act, as amended, for the  
 EPA EST. NO. pesticide registered under:

MANUFACTURED FOR  
 NUFARM AMERICAS INC.  
 11901 SOUTH AUSTIN AVENUE  
 ALSIP, IL 60803



EPA. Reg. No: 228-717

NET CONTENTS \_\_\_\_\_ GAL. ( \_\_\_\_\_ Liters)  
 [Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER - PELIGRO**

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Causes skin irritation. Avoid contact with eyes, skin or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Skin exposure may also result in a sensation described as tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

**Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category F on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

- Protective eyewear (goggles, face shield or safety glasses)
- Long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks, and
- Chemical-resistant gloves.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

**User should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**FIRST AID**

<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• <b>DO NOT</b> give any liquid to the person.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**NOTE TO PHYSICIAN**

Probable mucosal damage may contraindicate the use of a gastric lavage.  
Contains petroleum distillate – vomiting may cause aspiration pneumonia.

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

## Physical-Chemical Hazards

**DO NOT** store near or use with oxidizing agents.

## Environmental Hazards

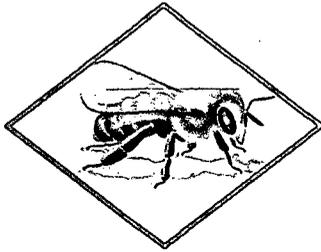
This pesticide is extremely toxic to fish and aquatic invertebrates.

For terrestrial uses: **DO NOT** apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwater.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. **DO NOT** apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging the treatment area. Additional information may be obtained by consulting your Cooperative Extension service.

Imidacloprid demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

# PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.**



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## DIRECTIONS FOR USE

### Restricted Use Pesticide

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these directions for use for crops that are contracted to have pollinator services or for food/feed crops and commercially grown ornamentals that are attractive to pollinators:

#### 1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

#### 2. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

#### RESTRICTIONS FOR ALL USES

- **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.
- **DO NOT** use this product in nurseries, greenhouses, plant propagation houses, or any plants grown for use as transplants.
- This product is classified as restricted use in the state of New York.
- Sale, use and distribution of this product in Nassau and Suffolk counties in the State of New York is prohibited.
- This label must be in possession of the user at the time of application.
- **DO NOT** apply when the wind velocity exceeds 15 mph. Only apply this product if the wind direction favors on-target deposition.
- **DO NOT** apply more than 0.5 lb. the active ingredient Imidacloprid per acre, per year regardless of formulation or method of application.

- **DO NOT** apply more than the maximum seasonal total for Lambda-Cyhalothrin when each product is used alone or as a component of this product.

**Note to Reviewer:** the two statements in brackets below may be used as they relate to *Tilia* species:

[**DO NOT** apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.]

[**DO NOT** apply this product, by any application method, to linden, basswood or other *Tilia* species.]

**Maximum Application Rate**

**DO NOT** exceed the maximum application rate of ai per acre per crop season allowed by using other gamma-cyhalothrin, lambda-cyhalothrin or imidacloprid containing products. The maximum rate allowed for use of gamma-cyhalothrin, lambda cyhalothrin and imidacloprid products used during the same crop growing season/year can be derived from the maximum rates in the following table:

CROP	Gamma-Cyhalothrin <sup>1,3</sup> (lb/ai/acre/season)	Lambda-Cyhalothrin <sup>1,3</sup> (lb/ai/acre/season)	Imidacloprid <sup>2</sup>
Cole Crops	0.12	0.24	0.23 lb/ai/acre/season
Cotton	0.10	0.20	0.31 lb/ai/acre/year
Fruiting Vegetables	0.18	0.36	0.23 lb/ai/acre/season
Legume Vegetables	0.06	0.12	0.13 lb/ai/acre/season
Lettuce	0.15	0.30	0.23 lb/ai/acre/season
Peanuts	0.06	0.12	0.13 lb/ai/acre/year
Pome Fruits	0.10	0.20	0.50 lb/ai/acre/year
Potato	0.06	0.12	0.20 lb/ai/acre/year
Soybean	0.04	0.08	0.14 lb/ai/acre/year
Stone Fruit - Apricot, Nectarine, Peach	0.10	0.20	0.30 lb/ai/acre/year
Stone Fruits- Cherries, Plums, Plumcot, Prune	0.10	0.20	0.50 lb/ai/acre/year
Sweet Potato, Tuberous & Corm Vegetables	0.06	0.12	0.13 lb/ai/acre/season
Tobacco	0.045	0.09	0.28 lb/ai/acre/year
Tree Nuts	0.08	0.16	0.36 lb/ai/acre/year

The following is applicable if both lambda-cyhalothrin and gamma-cyhalothrin are used on a crop during the same crop growing season:

When the maximum application rate of lambda-cyhalothrin is reached alone no gamma-cyhalothrin product can be used and when the maximum application rate of gamma-cyhalothrin is reached alone no lambda-cyhalothrin product can be used. If used in combination, the amounts of each that can be used can be calculated as shown in the following examples [the gamma-cyhalothrin quantity can be multiplied by 2 to calculate the total ai based upon lambda-cyhalothrin]:

**Example 1:** If the maximum use rate for lambda-cyhalothrin = 0.12 lb ai/acre/year and 0.06 lb ai has been applied,  $(0.12 - 0.06) \div 2 = 0.03$  lb ai of gamma-cyhalothrin could be applied during the remainder of the crop use season.

**Example 2:** If the maximum use rate for gamma-cyhalothrin = 0.06 lb ai/acre/year and 0.03 lb ai has been applied,  $(0.06 - 0.03) \times 2 = 0.06$  lb ai of lambda-cyhalothrin could be applied during the remainder of the crop use season.

<sup>2</sup> When the maximum application rate of imidacloprid is reached no imidacloprid product can be used.

<sup>3</sup> Includes any lambda-cyhalothrin or gamma-cyhalothrin product approved for crop uses.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short sleeve shirt and short pants,
- Chemical-resistant gloves, Category F (such as nitrile rubber, butyl rubber, barrier laminate, or Viton® ≥ 14 mils),
- Chemical-resistant footwear plus socks, and
- Chemical-resistant headgear for overhead exposure.

**APPLICATION INSTRUCTIONS**

Shake well before using.

Apply as a directed or broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment and spray adjuvant if necessary to obtain thorough coverage. Failure to provide adequate coverage and retention of this product on leaves and fruit may result in loss of insect control or delay in onset of activity. Apply this product with properly calibrated ground or aerial application equipment. Minimum spray volumes, unless otherwise specified on crop specific application instructions sections, are 10 gallons/Acre by ground applications and 5 gallons/Acre through aerial equipment. This product may also be applied by overhead chemigation (see additional **Chemigation Directions for Use** section below) if allowed in crop specific application instruction section.

**RESISTANCE MANAGEMENT**

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

This product contains a Group 3 Insecticide and a Group 4A Insecticide (lambda-cyhalothrin, belonging to the pyrethroid class of chemistry is a Group 3 Insecticide / imidacloprid, belonging to the neonicotinoid class of chemistry is a Group 4A Insecticide). Insect biotypes with acquired or inherent resistance to Group 3 and/or Group 4A may eventually dominate the insect population if Group 3 and/or Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 3A or Group 4A Insecticides.

One of the active ingredients in this product Insecticide is a member of the neonicotinoid chemical class. Avoid using a block of more than three consecutive applications of this product and/or other Group 4A products having the same or similar mode of action.

Following a neonicotinoid block of treatments, Nufarm strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect pest's ability to develop resistance to this class of chemistry.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://irac-online.org/>.

**ROTATIONAL CROPS**

Treated areas may be replanted with any crop specified on an imidacloprid label as specified below. There are no rotational crop restrictions based on lambda-cyhalothrin.

**ROTATIONAL PLANT-BACK INTERVALS\***

**IMMEDIATE PLANT-BACK**

All crops on this label plus the following crops not on this label: barley, canola, Christmas trees, corn (field, sweet and pop), cranberry, Globe artichoke, mustard seed, onion and bulb vegetables, rapeseed, strawberry, sorghum, sugarbeet,

<p>sunflower, tobacco, watercress, wheat and all crops from the following Crop Groups as recognized and defined by EPA.</p> <p>LEAFY PETIOLE VEGETABLES - Crops of Crop Subgroup 4B</p> <p>LEGUME VEGETABLES - Crops of Crop Group 6 including: Edible Podded plus Succulent Shelled, Peas and Beans</p> <p>CUCURBIT VEGETABLES - Crops of Crop Group 9</p> <p>BUSHBERRY and CANEBERRY - Crops of Crop Group 13</p> <p>HERBS - Crops of Crop Subgroup 19A</p> <p>ROOT VEGETABLES - Crops of Crop Subgroup 1B</p> <p>TROPICAL FRUIT - Including: Acerola, Atemoya, Avocado, Biriba, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Llama, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu</p>
<p><b>30-DAY PLANT-BACK</b></p> <p>Cereals (including buckwheat, millet, oats, rice, rye, and triticale), safflower</p>
<p><b>12-MONTH PLANT-BACK</b></p> <p>All other crops</p>
<p>*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.</p>

## FOLIAR APPLICATIONS

Apply using properly calibrated ground sprayers, fixed- or rotary-winged aircraft or through properly designed, sprinkler-type, chemigation equipment. Thorough and uniform coverage of plants, is required for pest control. Use of spray nozzles that provide medium-sized droplets are encouraged to reduce drift potential. For all aphids, apply as pest population begins to build and prior to build up of damaging levels. See **Spray Drift Management** section below for application guidelines on all application methods.

**Ground equipment applications** must be made in a minimum of 10 gallons/A. A non-ionic surfactant (NIS) is recommended for this use. See **Adjuvant** section below.

**Aerial applications** must be made in a minimum of 2 gallons/A. A crop-oil-concentrate (COC) is recommended for this use. See **Adjuvant** section below.

**Chemigation applications** must be made as concentrated as possible. For best results apply at 100% input for center pivots or 0.10 inch (2,716 gallons) up to 0.15 inch (4,073 gallons) of water/A for other systems. See additional directions and precautions given below. Use only the highest labeled rate for chemigation applications.

## TANK MIXES

Unless otherwise prohibited on this label or the label of an intended tank mix product, this product may be applied in combination with any pesticide registered for the same crop, timing, and method of application. Follow the most restrictive label statements of various tank mix products used.

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Maintain agitation throughout the spraying operation. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

## COMPATIBILITY

Before full-scale mixing of this product with foliar-applied adjuvants, fungicides, herbicides and insecticides/miticides and fertilizers determine the compatibility of the proposed mixture.

### Adjuvants

The use of an adjuvant may improve deposition, coverage and pest control.

- A high quality, non-ionic surfactant (NIS) is recommended for ground applications.
- A crop-oil-concentrate (COC) is recommended for aerial applications.
- All adjuvants regardless of their composition must be used according to the adjuvants manufacturer's use directions.
- **DO NOT** use petroleum-based and other non-emulsifiable oils with this product.

### Mixing order

When pesticide or fertilizer mixtures are needed, add products in the following order:

- Products packaged in PVA;
- Wettable-powders-or wettable granules;
- This product or other flowable type products;

- Emulsifiable concentrates;
- Fertilizer or micro-nutrient solutions

Ensure good agitation as each component is added. **DO NOT** add an additional component until the previous is thoroughly mixed. If a fertilizer or micro-nutrient solution is used, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

#### **Compatibility Note (Jar Test)**

Test compatibility of the intended mixture before adding this product to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used. For further information, contact your local Nufarm representative.

#### **IMPORTANT**

PESTICIDE TANK MIXES MAY INCREASE THE RISK OF MIXING INCOMPATIBILITIES, REDUCED EFFECTIVENESS AND/OR CAUSE CROP INJURY OR LOSS. ANY LIABILITY FOR LOSS, INJURY OR DAMAGE RESULTING FROM A TANK MIXTURE NOT SPECIFIED ON THIS LABEL OR IN MANUFACTURER'S SUPPLEMENTAL LABELING DISTRIBUTED FOR THIS PRODUCT IS SPECIFICALLY DISCLAIMED BY MANUFACTURER.

MIXING WITH OTHER SUBSTANCES MAY INCREASE THE RISK OF MIXING INCOMPATIBILITIES, REDUCED EFFECTIVENESS AND/OR CAUSE CROP INJURY OR LOSS. ANY LIABILITY FOR LOSS, INJURY OR DAMAGE RESULTING FROM A MIXTURE NOT SPECIFIED ON THIS LABEL OR IN MANUFACTURER'S SUPPLEMENTAL LABELING DISTRIBUTED FOR THIS PRODUCT IS SPECIFICALLY DISCLAIMED BY MANUFACTURER.

## **SPRAY DRIFT MANAGEMENT**

### **BUFFER ZONES**

#### **Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply this product onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

*Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp.*

[www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf](http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf)

In the State of New York, a 25 ft. vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 ft. vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

#### **Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

**DO NOT** apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### **Buffer Zone for ULV Aerial Application**

**DO NOT** apply within 450 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### **Buffer Zone for Non-ULV Aerial Application**

**DO NOT** apply within 150 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

## **SPRAY DRIFT REQUIREMENTS**

### **Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition.

**DO NOT** apply when the wind velocity exceeds 15 mph.

### **Temperature Inversion**

**DO NOT** make aerial or ground applications into temperature inversions.

Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

### Droplet Size

Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

### Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

### Additional Requirements for Aerial Applications

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices.

The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

## CHEMIGATION

### Sprinkler Irrigation Application

Apply this product at rates and timing described in the **Specific Use Directions** provided on this label. As local recommendations differ, consult your local State Extension Service or other local experts for recommendations on adjuvant or diluent types, adjuvant rates and mixing instructions.

Check the irrigation system to insure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the specified rate of this product into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1-0.2 acre inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above instructions, if application is being made during a normal irrigation set of a stationary sprinkler, the specified rate of this product for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

**DO NOT** apply this product through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

### Sprinkler Irrigation Application Directions & Restrictions

- A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move) irrigation system(s). **DO NOT** apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- D. **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

- E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- F. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- G. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- H. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- I. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- J. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- K. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- L. Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.
- M. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- N. **DO NOT** apply through chemigation systems connected to public water systems.

## SPECIFIC USE DIRECTIONS AGRICULTURAL USES

### For Foliar Applications

Apply specified rate per acre as a broadcast or directed foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. This product may be tank mixed with other insecticides for knockdown of pests or for improved control of other pests.

<b>COLE CROPS (HEAD &amp; STEM BRASSICA) – Foliar*:</b>			
<b>Crops of Crop Group 5A including:</b> Broccoli, Brussels sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli ( <i>gai lon</i> ), Chinese cabbage ( <i>napa</i> ), Chinese mustard cabbage ( <i>gai choy</i> ), Kohlrabi.			
<b>Pests</b>	<b>Fluid ounces/Acre</b>	<b>Application Methods</b>	<b>Remarks</b>
<b>For control of:</b> Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm species Imported Cabbageworm Southern Cabbageworm	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.	<sup>1</sup> For control of first and second instars only.  <sup>2</sup> Suppression only.  <sup>3</sup> See Resistance statement under Use Requirements and Precautions.
Aphid species <sup>3</sup> Armyworm Beet Armyworm <sup>1,3</sup> Corn Earworm Diamondback Moth <sup>3</sup> Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including	2.5 – 3.8	Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage.  When applying by ground, apply in a minimum of 10 gallons of water / acre.	

Lygus species <sup>3</sup> Spider Mite species <sup>2</sup> Stink Bug species Thrips species <sup>2</sup> Vegetable Weevil (Adult) Yellowstriped Armyworm		When applying by air, apply in a minimum of 2 gallons of water / acre.	
Whitefly species <sup>3</sup>	3.8		

**Restrictions**

**DO NOT** apply more than 23.0 fl. oz. of this product per acre per crop season.  
**DO NOT** apply within 7 days of harvest (**PHI - 7 Days**).  
**DO NOT** apply within 5 days of previous application (**Minimum retreatment interval – 5 Days**).  
 \*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

<b>COTTON - Foliar</b>			
<b>Pests</b>	<b>Fluid ounces/Acre</b>	<b>Application Methods</b>	<b>Remarks</b>
<b>For control of:</b> Cutworm species Soybean Thrips Tobacco Thrips	1.9 – 3.0	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days.	<sup>1</sup> For control of first and second instars only.
Aphids Banded-winged whitefly Bollworm/Budworm (ovicidal effect) Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Green Stink Bug Lygus Bug species <sup>3</sup> Pink Bollworm Saltmarsh Caterpillar Southern Green Stink Bug	3.0 – 3.8	Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.  Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage.	<sup>2</sup> Suppression only.  <sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .  <sup>4</sup> For control before the larva bores into the plant stalk.
Beet Armworm <sup>1,3</sup> Boll Weevil Cotton Bollworm European Corn Borer <sup>4</sup> Fall Armyworm Sweetpotato Whitefly <sup>2,3</sup> Tobacco Budworm <sup>3</sup> Twospotted Spider Mite <sup>2</sup>	3.8 – 5.0	When applying by ground, apply in a minimum of 10 gallons of water / acre.  When applying by air, apply in a minimum of 3 gallons of water / acre.	

**Aphids:** For best results, use the higher listed rate after first bloom or on rapidly increasing populations.  
**Bollworm/budworm:** Under light infestation levels 2.6 fl. oz. of product per acre may be applied in conjunction with intense field monitoring. When applied according to label this product also provided ovicidal control of unhatched *Heliothine* species eggs.  
**For boll weevil control:** spray on a 3 - 5 day schedule.  
**Adjuvants:** Insect control can be improved with the use of a non-ionic surfactant or COC. **DO NOT** use binder or sticker type surfactants.

**Restrictions**

**DO NOT** apply more than 25.6 fl. oz. of this product acre per year.  
**DO NOT** apply within 21 days of harvest. (**PHI - 21 Days**).  
**DO NOT** apply within 7 days of previous application (**Minimum retreatment interval – 7 Days**).  
**DO NOT** graze livestock in treated areas.  
 Regardless of formulation or method of application, apply no more than 0.5 lb active ingredient of Imidacloprid per acre per season, including seed treatment soil and foliar uses.

**FRUITING VEGETABLES\* - Foliar:**

**Crops of Crop Group 8 including:** Eggplant, Ground cherry, Pepino, Peppers (including bell, chili, cooking, pimento and sweet), Tomatillo, Tomato

Pests	Fluid ounces/Acre	Application Methods	Remarks
<b>For control of:</b> Cabbage Looper Cutworm species Hornworm species	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 5 or more days.	<sup>1</sup> For control of first and second instars only.
<b>For control of:</b> Aphid species <sup>3</sup> Beet Armyworm <sup>1,3</sup> Blister Beetle species Colorado Potato Beetle <sup>3</sup> Cucumber Beetle species (Adult) European Corn Borer <sup>4</sup> Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Leafminer species <sup>2</sup> Meadow Spittlebug Pepper Weevil (Adult) <sup>2</sup> Plant Bug species including Lygus species <sup>3</sup> Southern Armyworm <sup>1</sup> Spider Mite species <sup>2</sup> Stalk Borer <sup>4</sup> Stink Bug species Thrips species <sup>5</sup> Tobacco Budworm <sup>3</sup> Tomato Fruitworm Tomato Pinworm Tomato Psyllid <sup>2,3</sup> Vegetable Weevil (Adult) Yellowstriped Armyworm <sup>1</sup>	2.5 – 3.8	Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage.  When applying by ground, apply in a minimum of 10 gallons of water / acre.  When applying by air, apply in a minimum of 2 gallons of water / acre.	<sup>2</sup> Suppression only.  <sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .  <sup>4</sup> For control before the larva bores into the plant stalk or fruit.  <sup>5</sup> Does not include Western Flower Thrips or <i>Thrips palmi</i> ; Controls foliage feeding thrips only.
Whitefly species <sup>3</sup>	3.8		

**Pepper weevil:** Apply specified dosage of this product by ground equipment only, timing applications prior to a damaging pest population becoming established. Good coverage of foliage and fruit is necessary for optimal control. Applications of this product must be incorporated into a full-season program, where alternations of effective products from multiple classes of chemistry and different modes of actions are utilized in a blocked or windowed approach. For additional information, please contact your Nufarm representative, Extension Specialist or crop advisor.

**Restrictions**

**DO NOT** apply more than 23.0 fl. oz. of this product per acre per crop season.  
**DO NOT** apply within 5 days of harvest (**PHI - 5 Days**).  
**DO NOT** apply within 5 days of previous application (**Minimum retreatment interval – 5 Days**).  
 \*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

**LEGUME VEGETABLES\* - Beans & Peas, except Soybean - Foliar:**

**Crops of Crop Group 6 (Except soybean, dry) including:** Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean, Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin),

Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*vigna* spp., includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean), Pea (*Pisum* spp. includes dwarf pea, edible pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea), Other Beans and Peas [Broad bean (fava), chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean, lentil, Pigeon pea, soybean (immature seed), Sword bean]

Pests	Fluid ounces/Acre	Application Methods	Remarks
<b>For control of:</b> Cutworm species Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetbean Caterpillar	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.	<sup>1</sup> For control before the larva bores into the plant stalk or pods. <sup>2</sup> Use higher listed rates for large larvae.
Alfalfa Caterpillar Aphid species <sup>4</sup> Armyworm <sup>2</sup> Bean Leaf Beetle Bean Leafskeltonizer Blister Beetle species Corn Earworm Corn Rootworm Beetle species (Adult) Cucumber Beetle species (Adult) Curculio and Weevil species <sup>1</sup> (foliage & pod feeding adults & larvae) European Corn Borer <sup>1</sup> Fall Armyworm <sup>2</sup> Flea Beetle species (Adult) Fleahopper species Grasshopper species Japanese Beetle (Adult) Leafhopper species Leaf-tier species Looper species (except Soybean Looper) Meadow Spittlebug Painted Lady Butterfly (Larva) Plant Bug species including Lygus species <sup>4</sup> Stalk Borer <sup>1</sup> Stink Bug species Threecornered Alfalfa Hopper Thrips species <sup>4,5</sup> Tobacco Budworm <sup>4</sup> Webworm species	2.5 – 3.8	Apply with ground or air equipment using sufficient water to obtain full coverage of foliage.  When applying by air, apply in a minimum of 2 gallons of water per acre.	<sup>3</sup> Suppression only. <sup>4</sup> See <b>Resistance statement under Use Requirements and Precautions.</b> <sup>5</sup> Does not include Western Flower Thrips.
Beet Armyworm <sup>3,4</sup> Leafminer species <sup>3,4</sup> Lesser Cornstalk Borer <sup>3</sup> Soybean Looper <sup>3,4</sup> Spider Mite species <sup>3</sup> Whitefly species <sup>4</sup>	3.8		

**Restrictions**

**DO NOT** apply more than 12.4 fl. oz. of this product per acre per crop season.  
 For edible podded and succulent shelled legume vegetables, **DO NOT** apply within 7 days of harvest (**PHI - 7 Days**).  
 For dried shelled legume vegetables, **DO NOT** apply within 21 days of harvest (**PHI - 21 Days**).  
**DO NOT** apply within 7 days of previous application (**Minimum retreatment interval – 7 Days**).  
 For succulent and dried shelled peas and beans, **DO NOT** graze livestock in treated areas or harvest vines for forage or hay.

\*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

**LETTUCE\* (Head & Leaf) - Foliar**

Pests	Fluid ounces/Acre	Application Methods	Remarks
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<b>For control of:</b> Alfalfa Looper Cabbage Looper Cutworm species Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.	<sup>1</sup> For control of first and second instars only. <sup>2</sup> Suppression only. <sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .
Aphid species <sup>3</sup> Armyworm Beet Armyworm <sup>1,3</sup> Corn Earworm Diamondback Moth <sup>3</sup> European Corn Borer <sup>4</sup> Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species <sup>3</sup> Southern Armyworm Spider Mite species <sup>2</sup> Stink Bug species Tobacco Budworm <sup>3</sup> Vegetable Weevil (Adult)	2.5 – 3.8	Apply with ground or air equipment using sufficient water to obtain full coverage of foliage.  When applying by ground, apply in a minimum of 10 gallons of water / acre.  When applying by air, apply in a minimum of 2 gallons of water / acre.	<sup>4</sup> For control before the larva bores into the stem or head.
Whitefly species <sup>3</sup>	3.8		
<b>Restrictions</b>			
DO NOT apply more than 23.0 fl. oz. of this product per acre per crop season. DO NOT apply within 7 days of harvest (PHI - 7 Days). DO NOT apply within 5 days of previous application (Minimum retreatment interval – 5 Days).			
*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.			

<b>PEANUTS - Foliar</b>			
<b>Pests</b>	<b>Fluid ounces/Acre</b>	<b>Application Methods</b>	<b>Remarks</b>
<b>For control of:</b> Cutworm species Green Cloverworm Leafhoppers Rednecked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.	<sup>1</sup> Use higher listed rates for large larvae. <sup>2</sup> Suppression only.
<b>For control of:</b> Armyworm <sup>1</sup> Bean Leaf Beetle Corn Earworm Fall Armyworm <sup>1</sup> Grasshopper Species Southern Corn Rootworm (Adult) Stink Bug species Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult)	2.5 – 3.8	Apply with ground or air equipment using sufficient water to obtain full coverage of foliage.  When applying by air, apply in a minimum of 2 gallons of water per acre.	<sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .
<b>For control of:</b> Aphids <sup>3</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup> Spider Mite Species <sup>2</sup>	3.8		

Whitefly species <sup>3</sup>			
<b>Restrictions</b>			
<p><b>DO NOT</b> apply more than 12.4 fl. oz. of this product per acre per year.  <b>DO NOT</b> apply within 14 days of harvest (<b>PHI - 14 Days</b>) (minimum time between final application and threshing for seed).  <b>DO NOT</b> apply within 5 days of previous application (<b>Minimum retreatment interval – 5 Days</b>).</p>			

<b>POME FRUITS - Foliar:</b>			
Crops of Crop Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Oriental Pear, Pear, Quince			
Pests	Fluid ounces/Acre	Application Methods	Remarks
<p><b>For control of:</b>            Apple Aphid            Apple Maggot (Adult)<sup>2</sup>            Cherry Fruit Fly species (Adult)            Codling Moth            Green Fruitworm            Japanese Beetle            Leafhopper species            Leafroller species            Lesser Appleworm            Omnivorous Leafroller            Orange Tortrix            Oriental Fruit Moth            Pear Psylla<sup>1</sup>            Periodical Cicada            Plant Bug species            Plum Curculio            Rosy Apple Aphid            San Jose Scale                (crawlers, fruit infestations only)            Sawfly species            Spirea Aphid<sup>1</sup>            Stink Bug species            Tent Caterpillar species            Tentiform Leaf Miner species            Tree Borer species (Adult)            Tufted Apple Budworm            Webworm species</p>	2.5 -5.0	<p>Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 10 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.</p> <p>Apply with ground or air equipment using sufficient water to obtain full coverage of all above ground plant parts.</p> <p>When applying by air, apply in a minimum of 2 gallons of water per acre, but use higher listed rates as appropriate for thorough coverage.</p> <p>When applying by ground, apply in a minimum of 10 gallons of water per acre. For best results apply in a minimum of 50 gallons of water / acre to ensure thorough coverage.</p>	<p><sup>1</sup>Suppression only.   <sup>2</sup>Applications targeting apple maggot should be combined with manufacturer's specified rate of a sticker.</p>
<b>Restrictions</b>			
<p><b>DO NOT</b> apply more than 25.6 fl. oz. of this product per acre per year.  <b>DO NOT</b> apply more than 20.5 fl. oz. of this product per acre per year post bloom.  <b>DO NOT</b> apply within 21 days of harvest (<b>PHI - 21 Days</b>).  <b>DO NOT</b> apply within 10 days of previous application (<b>Minimum retreatment interval – 10 Days</b>).  <b>DO NOT</b> apply pre-bloom or during bloom or when bees are foraging.</p>			

<b>POTATO - Foliar</b>			
Pests	Fluid ounces/Acre	Application Methods	Remarks
<p><b>For control of:</b>            Cutworm species            Leafhopper species            Saltmarsh Caterpillar            Woollybear Caterpillar species</p>	1.9 – 2.5	<p>Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days. Timing and frequency of</p>	<p><sup>1</sup>Use higher listed rate for large larvae.   <sup>2</sup>Suppression only.</p>

<p>Aphid species<sup>3</sup>          Armyworm species<sup>1</sup>          Blister Beetle species          Colorado Potato Beetle<sup>3</sup>          Corn Earworm          Cricket Species          Cucumber Beetle species (Adult)          European Corn Borer          Flea Beetle Species (Adult)          Fleahoppers          Grasshopper species          Looper species<sup>3</sup>          Plant Bug species including              Lygus species<sup>3</sup>          Potato Psyllid          Potato Tuberworm          Stink Bug species          Thrips species<sup>3,4</sup>          Tortoise Beetle species          Webworm species          Weevil species (Adult)</p>	<p>2.5 – 3.8</p>	<p>applications should be based upon insect populations reaching locally determined economic thresholds and IPM recommendations.</p> <p>Apply with ground or air equipment using sufficient water to obtain full coverage of all above ground plant parts.</p> <p>When applying by air, apply in a minimum of 2 gallons total solution per acre.</p> <p>When applying by ground, a minimum of 10 gallons total solution per acre is recommended.</p>	<p><sup>3</sup>See <b>Resistance</b> statement under <b>Use Requirements and Precautions.</b></p> <p><sup>4</sup>Does not include Western Flower Thrips.</p>
<p>Leafminer species<sup>2,3</sup>          Spider Mite species<sup>2</sup>          Whitefly species<sup>3</sup></p>	<p>3.8</p>		

**Restrictions**

**DO NOT** apply more than 15.4 fl. oz. of this product per acre per year.  
**DO NOT** apply within 7 days of harvest (**PHI - 7 Days**).  
**DO NOT** apply within 7 days of previous application (**Minimum retreatment interval – 7 Days**).

**SOYBEAN\* (Legume Vegetable) - Foliar**

Pests	Fluid ounces/Acre	Application Methods	Remarks
<p><b>For control of:</b>            Bean Leaf Beetle            Cabbage Looper            Corn Earworm            Corn Rootworm Beetle Species (Adult)<sup>6</sup>            Cutworm species            Green Cloverworm            Mexican Bean Beetle            Painted Lady Butterfly (Larva)            Potato Leafhopper            Saltmarsh Caterpillar            Soybean Aphids<sup>4</sup>            Threecornered Alfalfa Hopper            Thrips species<sup>5</sup>            Velvetbean Caterpillar            Woollybear Caterpillar species</p>	<p>1.9 – 3.2</p>	<p>Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.</p> <p>Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage.</p>	<p><sup>1</sup>Use higher listed rate for large larvae.</p> <p><sup>2</sup>Suppression only.</p> <p><sup>3</sup>See <b>Resistance</b> statement under <b>Use Requirements and Precautions.</b></p> <p><sup>4</sup>Use higher listed rate for heavy populations and/or late-season applications.</p>
<p>Armyworm<sup>1</sup>            Blister Beetle species            European Corn Borer            Fall Armyworm<sup>1</sup>            Grasshopper species            Japanese Beetle (Adult)            Plant Bug species            Silverspotted Skipper            Stink Bug species            Tobacco Budworm<sup>3</sup></p>	<p>3.2 – 3.8</p>	<p>When applying by ground, apply in a minimum of 10 gallons of water / acre.</p> <p>When applying by air, apply in a minimum of 2 gallons of water per acre.</p>	<p><sup>5</sup>Does not include Western Flower Thrips.</p> <p><sup>6</sup>For control of adult corn rootworm beetles (<i>Diabrotica</i> species) as part of an aerial-applied corn rootworm</p>

Webworm species Yellowstriped Armyworm <sup>1</sup>		3.8	control program use a minimum of 2.5 fl. oz. of this product per acre.
Beet Armyworm <sup>2,3</sup>			
Lesser Cornstalk Borer <sup>2</sup>			
Soybean Looper <sup>2,3</sup>			
Spider Mite species <sup>2</sup> Whitefly species <sup>3</sup>			

**Stink bugs:** Control may require the use of two applications made at 7 to 10 day intervals.

### Restrictions

- DO NOT** apply more than 7.7 fl. oz. of this product per acre per year.
- DO NOT** apply within 30 days of harvest (**PHI - 30 Days**).
- DO NOT** apply within 7 days of previous application (**Minimum retreatment interval – 7 Days**).
- DO NOT** graze or harvest treated soybean forage, straw, or hay for livestock feed.
- DO NOT** apply this product within 45 days of planting if soybean seeds were treated with a neonicotinoid product.

\* Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

### STONE FRUITS<sup>1</sup> - Foliar:

**Crops of Crop Group 12 including:** Apricot<sup>2</sup>, Cherry<sup>3</sup> (including sweet and tart), Nectarine<sup>2</sup>, Peach<sup>2</sup>, Plum<sup>3</sup> (including chickasaw, damson and Japanese), Plumcot<sup>3</sup>, Prune<sup>3</sup> (fresh and dried)

Pests	Fluid ounces/Acre	Application Methods	Remarks
<b>For control of:</b> American Plum Borer Aphid Species Apple Maggot (Adult) Cherry Fruit Fly species (Adult) Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper species Leafroller species Oriental Fruit Moth Peach Twig Borer Peachtree Borer species Periodical Cicada Plant Bug species Plum Curculio Rose Chafer Sawfly species Stink Bug species Tent Caterpillar species Thrips species <sup>4</sup>	2.5 -5.0	Apply before pests reach damaging levels. Apply as required by scouting, at intervals equal or greater than those specified under <b>Restrictions</b> . Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold and IPM recommendations.  Apply with ground equipment using sufficient water and application methods to obtain full coverage of foliage.  When applying by ground, apply in a minimum of 50 gallons of water / acre.	<sup>4</sup> Suppression only.

<sup>1</sup>**For Stone Fruit:** **DO NOT** apply this product between the pre-bloom (swollen bud) and post bloom (petal fall) growth stages.

<sup>2</sup>**For Apricot, Nectarine, Peach:** Minimum application volume (water): 50 GPA - ground application; 25 GPA - aerial application.

<sup>3</sup>**For Cherries, Plums, Plumcot, Prune:** Minimum application volume (water): 50 GPA - ground application; 25 GPA - aerial application.

### Restrictions

- DO NOT** apply more than 25.6 fl. oz. of this per acre per year.
- DO NOT** apply more than 20.5 fl. oz. of this product per acre per year post bloom.
- DO NOT** apply within 14 days of harvest (**PHI - 14 Days**).
- DO NOT** apply pre-bloom or during bloom or when bees are foraging.

**For Apricot, Nectarine and Peach :**

**DO NOT** apply within 7 days of previous application (**Minimum retreatment interval – 7 Days**).

**For Cherry, Plum, Plumcot and Prune:**

**DO NOT** apply within 10 days of previous application (**Minimum retreatment interval – 10 Days**).

### **SWEET POTATO and other TUBEROUS & CORM VEGETABLES\* - Foliar:**

**Crops of Crop Group 1C including:** Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible. Queensland arrowroot), Cassava (bitter and sweet)\*, Chayote (root), Chufa, Dasheen (taro) \*, Ginger, Leren, Sweet Potato, Tanier (cocoyam) \*, Turmeric, Yam bean (jicama, manioc pea), Yam (true)\*

**For application to Potato see Potato Section.**

<b>Pests</b>	<b>Fluid ounces/Acre</b>	<b>Application Methods</b>	<b>Remarks</b>
<b>For control of:</b> Cutworm species Leafhopper species Saltmarsh Caterpillar Sweet Potato Hornworm Woollybear Caterpillar species	1.9 – 2.5	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds and IPM recommendations.	<sup>1</sup> Use higher listed rate for large larvae. <sup>2</sup> Suppression only. <sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .
Aphid species <sup>3</sup> Armyworm species <sup>1</sup> Blister Beetle species Corn Earworm Cricket Species Cucumber Beetle species (Adult) Flea Beetle Species (Adult) Grasshopper species Looper species <sup>3</sup> Plant Bug species including Lygus species <sup>3</sup> Stink Bug species Sweet Potato Leaf Beetle (Adult) Sweet Potato Vine Borer Thrips species <sup>3,4</sup> Tortoise Beetle species Webworm species Weevil species (Adult)	2.5 – 3.8	Apply with ground or air equipment using sufficient water to obtain full coverage of all above ground plant parts.  When applying by air, apply in a minimum of 2 gallons total solution per acre.  When applying by ground, a minimum of 10 gallons total solution per acre is recommended.	<sup>4</sup> Does not include Western Flower Thrips.
Leafminer species <sup>2,3</sup> Spider Mite species <sup>2</sup> Whitefly species <sup>3</sup>	3.8		

### **Restrictions**

**DO NOT** apply more than 12.4 fl. oz. of this product per acre per year.

**DO NOT** apply within 7 days of harvest (**PHI - 7 Days**).

**DO NOT** apply within 5 days of previous application (**Minimum retreatment interval – 5 Days**).

**DO NOT** apply this product for these listed crops more than 3 times per crop season.

\*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

\*Tops or greens from these crops may be utilized for food or feed.

### **TOBACCO - Foliar**

<b>Pests</b>	<b>Fluid ounces/Acre</b>	<b>Application Methods</b>	<b>Remarks</b>
<b>For control of:</b> Aphids <sup>3</sup> Armyworm species <sup>1</sup> Blister Beetle species Cabbage Looper Corn Earworm Cucumber Beetle species (Adult) Cutworm species Grasshopper species Japanese Beetle (Adult) Katydid species	1.9 – 3.8	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.  Apply with ground or air	<sup>1</sup> For control of first and second instars only. <sup>2</sup> Suppression only. <sup>3</sup> See <b>Resistance</b> statement under <b>Use Requirements and Precautions</b> .

Plant Bug species Potato Tuberworm Saltmarsh Caterpillar Stink Bug species Thrips species <sup>2</sup> Tobacco Budworm <sup>3</sup> Tobacco Flea Beetle (Adult) Tobacco Hornworm Tomato Hornworm Tree Cricket species Vegetable Weevil (Adult) Webworm species		equipment using sufficient water and application methods to obtain full coverage of foliage.  When applying by air, apply in a minimum of 5 gallons of water per acre.	
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**Restrictions**

**DO NOT** apply more than 11.5 fl. oz. of this product per acre per year.  
**DO NOT** apply within 40 days of harvest (PHI - 40 Days).  
**DO NOT** apply within 7 days of previous application (Minimum retreatment interval – 7 Days).

**TREE NUTS - Foliar:**

**Crops of Crop Group 14 except Almonds including:** Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory nut, Macadamia nut (Bush nut), Pecan, Pistachio, Walnut (black and English) (Persian)

Pests	Fluid ounces/Acre	Application Methods	Remarks
<b>For control of:</b> Ant species Aphids Chinch Bug Codling Moth Filbertworm Hickory Shuckworm Leaffooted Bug Leafroller species Navel Orangeworm Peach Twig Borer Pecan Casebearer species Phylloxera species (leaf infestations) Pecan Spittlebug Pecan Weevil Plant Bug species Stink Bug species Walnut Husk Fly species (Adult)	2.5 -5.0	Apply before pests reach damaging levels. Apply as required by scouting, at intervals of 6 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.  When applying with ground equipment use a minimum application volume (water) of 50 GPA.  When applying with aerial application equipment use a minimum application volume (water) of 25 GPA.	<sup>1</sup> Time applications to control San Jose scale according to crawler stage, treating each successive generation. Two applications on a 10 to 14-day interval may be required to achieve control.
Leafhoppers & Sharpshooters Whiteflies San Jose scale <sup>1</sup>	5.0		

**Restrictions**

**DO NOT** use in Almonds.  
**DO NOT** apply more than 20.5 fl. oz. of this product per acre per year.  
**DO NOT** apply more than 15.4 fl. oz. of this product per acre per year post bloom.  
**DO NOT** apply within 14 days of harvest (PHI - 14 Days).  
**DO NOT** apply within 6 days of previous application (Minimum retreatment interval – 6 Days).  
**DO NOT** apply pre-bloom or during bloom or when bees are foraging.

### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE: DO NOT STORE PRODUCT IN AREAS THAT EXCEED TEMPERATURES OF GREATER THAN 110°F.** **DO NOT** store near or use with oxidizing agents. Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. **DO NOT** walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

You may contact CHEMTREC at 800-424-9300 for decontamination procedures or any other assistance that may be necessary.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

*[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements]* "This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

*[Note to Reviewer: The bracketed section headers will be included when multiple container types / sizes are listed on the label.]*

#### [Nonrefillable Containers 5 Gallons or Less]

**Nonrefillable container: DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

**Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

#### [Nonrefillable Containers Larger than 5 Gallons]

**Nonrefillable container. DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### [Refillable Containers Larger than 5 Gallons]

**Refillable container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### [Refillable Containers for Return to Nufarm]

**Refillable container:** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

**WARRANTY DISCLAIMER**

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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**If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.**

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